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SEQUENCE LISTING

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<120> USES OF MELANOCORTIN-4 RECEPTOR (MC4R) AGONIST PEPTIDES
ADMINISTERED BY CONTINUOUS INFUSION

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<141> 2004-06-17

<150> US 60/479740
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<151> 2004-05-13

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<170> PatentIn version 3.3

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<400> 43

Cys Glu His Phe Arg Trp Cys
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Cys Glu His Phe Arg Trp Cys
1 5

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Arg Cys Glu His Phe Arg Trp Cys
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Arg Cys Glu His Phe Arg Trp Cys
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Arg Cys Glu His Phe Arg Trp Cys
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Arg Cys Glu His Phe Arg Trp Cys
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Arg Cys Glu His Phe Arg Trp Cys
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<400> 53

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1 5

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<223> Xaa = citrulline

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<223> D form

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Xaa Cys Glu His Phe Arg Trp Cys
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<212> PRT

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Xaa Cys Glu His Phe Arg Trp Cys
1 5

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<211> 8
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<220>
<223> Synthetic construct

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<222> (2)..(8)

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<223> D form

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<220>
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<223> AMIDATION

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Leu Cys Glu His Phe Arg Trp Cys
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<212> PRT

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<220>

<221> MOD_RES

<222> (5)..(5)

<223> D form

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<223> AMIDATION

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Lys Cys Glu His Phe Arg Trp Cys
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Xaa Cys Glu His Phe Arg Trp Cys
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<223> D form

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Xaa Cys Glu His Phe Arg Trp Cys Ser Pro
1 5 10

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<223> D form

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<400> 62

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Xaa Cys Glu His Phe Arg Trp Cys
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Val Cys Glu His Phe Arg Trp Cys
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<220>
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<223> D form

<220>
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<400> 64

Arg Cys Glu His Phe Arg Trp Cys
1 5

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<223> D form

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Arg Cys Glu His Phe Arg Trp Cys
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<223> D form

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<400> 70

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1 5

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Tyr Arg Cys Glu His Phe Arg Trp Cys Glu
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1 5

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 Tyr Arg Cys Glu His Phe Arg Trp Cys
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Tyr Arg Cys Glu His Phe Arg Trp Cys
 1 5

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Tyr Arg Cys Glu His Phe Arg Trp Cys

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Tyr Arg Cys Glu His Phe Arg Trp Cys
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<400> 78

Tyr Arg Cys Glu His Phe Arg Trp Xaa
1 5

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1 5

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 1 5

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<220>
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 1 5

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 <223> 4-fluoro substituted, D form

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Tyr Arg Cys Glu His Phe Arg Trp Cys
1 5

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1 5

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Tyr Arg Cys Glu His Phe Arg Trp Cys Lys Xaa
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Tyr Xaa Cys Glu His Phe Arg Trp Cys
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Tyr Xaa Cys Glu His Phe Arg Trp Cys
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Arg Xaa His Phe Arg Trp Cys
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Arg Xaa His Phe Arg Trp Cys
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Arg Xaa His Phe Arg Trp Cys
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Xaa Xaa His Phe Arg Trp Cys
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Gly Xaa His Phe Arg Trp Cys
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Tyr Arg Xaa His Phe Arg Trp Cys
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Tyr Arg Xaa His Phe Arg Trp Cys
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Tyr Arg Xaa His Phe Arg Trp Cys
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Tyr Arg Xaa His Phe Arg Trp Cys
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Xaa His Phe Arg Trp Xaa
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Xaa His Phe Arg Trp Xaa
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Xaa His Phe Arg Trp Xaa
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Xaa His Phe Arg Trp Xaa
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Xaa His Phe Arg Trp Xaa
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Xaa His Phe Arg Trp Xaa
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Xaa His Phe Arg Trp Xaa
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Xaa His Phe Arg Trp Xaa
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<400> 177

Xaa Xaa His Phe Arg Trp Xaa
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Gly Xaa His Phe Arg Trp Xaa
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<223> D form

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<223> Xaa = homocysteine

<400> 179

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Xaa His Phe Arg Trp Xaa
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 Cys His Phe Arg Trp Xaa
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Cys His Phe Arg Trp Xaa
1 5

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Cys His Phe Arg Trp Xaa
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Cys His Phe Arg Trp Xaa
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Cys His Phe Arg Trp Xaa
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Cys His Phe Arg Trp Xaa
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Arg Cys His Phe Arg Trp Xaa
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<212> PRT
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Arg Cys His Phe Arg Trp Xaa
1          5

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Arg Cys His Phe Arg Trp Xaa
1          5

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Arg Cys His Phe Arg Trp Xaa
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Arg Cys His Phe Arg Trp Xaa
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Arg Cys His Phe Arg Trp Xaa
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Tyr Arg Cys Glu His Phe Arg Trp Xaa
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Xaa His Phe Arg Trp Xaa
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Arg Xaa His Phe Arg Trp Xaa
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<400> 195

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Arg Xaa His Phe Arg Trp Xaa
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<223> Xaa = homocysteine

<400> 196

Tyr Arg Xaa His Phe Arg Trp Xaa
1 5

<210> 197
<211> 9
<212> PRT
<213> Artificial

<220>
<223> Synthetic construct

<220>
<221> MOD_RES
<222> (1)..(1)
<223> ACETYLTATION

<220>
<221> DISULFID
<222> (3)..(9)

<220>
<221> MISC_FEATURE
<222> (3)..(3)
<223> Xaa = homocysteine

<220>
<221> MOD_RES
<222> (6)..(6)
<223> D form

<220>
<221> MOD_RES
<222> (9)..(9)
<223> AMIDATION

<220>
<221> MISC_FEATURE
<222> (9)..(9)
<223> Xaa = homocysteine

<400> 197

Tyr Arg Xaa Glu His Phe Arg Trp Xaa
1 5

<210> 198
<211> 6
<212> PRT
<213> Artificial

<220>
<223> Synthetic construct

<220>
<221> MOD_RES

<222> (1)..(1)
<223> ACETYLATION

<220>
<221> DISULFID
<222> (1)..(6)
<223> S-CH₂-S linkage

<220>
<221> MOD_RES
<222> (3)..(3)
<223> D form

<220>
<221> MOD_RES
<222> (6)..(6)
<223> AMIDATION

<400> 198

Cys His Phe Arg Trp Cys
1 5

<210> 199
<211> 9
<212> PRT
<213> Artificial

<220>
<223> Synthetic construct

<220>
<221> MISC_FEATURE
<222> (1)..(1)
<223> Xaa = Arg, Tyr-Arg, Tyr-beta-Arg, or is absent

<220>
<221> MISC_FEATURE
<222> (1)..(1)
<223> Xaa = a modified amino acid including Arg, citrulline, homoarginine, Leu, Lys, N-isopropyl-Lys, norleucine, ornithine, or Val

<220>
<221> MISC_FEATURE
<222> (1)..(1)
<223> Xaa = a modified group including Tyr-Arg, Tyr-citrulline, Cya-Arg, Tyr-homoarginine, Tyr-l-beta-homoarginine, Tyr-Lys, Tyr-Ser, or Tyr-Val

<220>
<221> DISULFID
<222> (2)..(8)
<223> S-S or S-CH₂-S disulfide bridge

<220>
<221> MISC_FEATURE
<222> (2)..(2)
<223> Xaa = Cys, homocysteine, or desamino-cysteine; may be D or L form

<220>
<221> MISC_FEATURE

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<222> (3)..(3)
<223> Xaa = Glu, Gln, Asp, Asn, Ala, Gly, Thr, Ser, Pro, Met, Ile, Val,
Arg, His, Tyr, Trp, Phe, Lys, Leu, cysteic acid, or is absent

<220>
<221> MISC_FEATURE
<222> (4)..(4)
<223> Xaa = His, modified His, or modified Ala; D or L form

<220>
<221> MISC_FEATURE
<222> (5)..(5)
<223> Xaa = Phe, modified Phe, or modified Ala; D or L form

<220>
<221> MISC_FEATURE
<222> (6)..(6)
<223> Xaa = Arg or modified Arg; D or L form

<220>
<221> MISC_FEATURE
<222> (8)..(8)
<223> Xaa = Cys, homocysteine, or modified cysteine or homocysteine
(such as amide, alcohol, or penicillamine)

<220>
<221> MISC_FEATURE
<222> (9)..(9)
<223> Xaa = Ser-Pro-NH₂, Lys-Pro-NH₂, Ser-OH, Ser-Pro-OH, Lys-OH, Ser
alcohol, Ser-Pro alcohol, Arg-Phe-NH₂, Glu-NH₂, or is absent

<400> 199

Xaa Xaa Xaa Xaa Xaa Xaa Trp Xaa Xaa
1 5

<210> 200
<211> 8
<212> PRT
<213> Artificial

<220>
<223> Synthetic construct

<220>
<221> MISC_FEATURE
<222> (1)..(1)
<223> Xaa = Arg, Tyr-Arg, Tyr-beta-Arg, or is absent

<220>
<221> MISC_FEATURE
<222> (1)..(1)
<223> Xaa = a modified amino acid including Arg, citrulline,
homoarginine, Leu, Lys, N-isopropyl-Lys, norleucine, ornithine,
or Val

<220>
<221> MISC_FEATURE
<222> (1)..(1)
<223> Xaa = a modified group including Tyr-Arg, Tyr-citrulline,
Cya-Arg, Tyr-homoarginine, Tyr-1-beta-homoarginine, Tyr-Lys,
Tyr-Ser, or Tyr-Val

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<220>
<221> DISULFID
<222> (2)..(8)

<220>
<221> MISC_FEATURE
<222> (2)..(2)
<223> Xaa = Cys or homocysteine

<220>
<221> MISC_FEATURE
<222> (3)..(3)
<223> Xaa = Glu, Gln, Asp, Asn, Ala, Gly, Thr, Ser, Pro, Met, Ile, Val,
Arg, His, Tyr, Trp, Phe, Lys, Leu, cysteic acid, or is absent

<220>
<221> MOD_RES
<222> (4)..(4)
<223> His may be optionally substituted, D or L form

<220>
<221> MOD_RES
<222> (5)..(5)
<223> Phe may be optionally substituted, D or L form

<220>
<221> MISC_FEATURE
<222> (8)..(8)
<223> Xaa = Cys, homocysteine, or modified cysteine or homocysteine
such as amide

<220>
<221> MISC_FEATURE
<222> (9)..(9)
<223> Xaa = Ser-Pro-NH2, Lys-Pro-NH2, Ser-OH, Ser-Pro-OH, Lys-OH, Ser
alcohol, Ser-Pro alcohol, Arg-Phe-NH2, Glu-NH2, or is absent

<400> 200
Xaa Xaa Xaa His Phe Arg Xaa Xaa
1 5

<210> 201
<211> 9
<212> PRT
<213> Artificial

<220>
<223> Synthetic construct

<220>
<221> MISC_FEATURE
<222> (1)..(1)
<223> Xaa = Arg, Tyr-Arg, Tyr-beta-Arg, or is absent

<220>
<221> MISC_FEATURE
<222> (1)..(1)
<223> Xaa = a modified amino acid including Arg, citrulline,
homoarginine, Leu, Lys, N-isopropyl-Lys, norleucine, ornithine,
or Val

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<220>
<221> MISC_FEATURE
<222> (1)..(1)
<223> Xaa = a modified group including Tyr-Arg, Tyr-citrulline,
      Tyr-homoarginine, Tyr-1-beta-homoarginine, Tyr-Lys, Tyr-Ser, or
      Tyr-Val

<220>
<221> DISULFID
<222> (2)..(8)

<220>
<221> MISC_FEATURE
<222> (2)..(2)
<223> Xaa = Cys or homocysteine

<220>
<221> MISC_FEATURE
<222> (3)..(3)
<223> Xaa = Glu, Gln, Asp, Asn, Ala, Gly, Thr, Ser, Pro, Met, Ile, Val,
      Arg, His, Tyr, Trp, Phe, or is absent

<220>
<221> MOD_RES
<222> (4)..(4)
<223> His may be optionally substituted, D or L form

<220>
<221> MOD_RES
<222> (5)..(5)
<223> Phe may be optionally substituted, D or L form

<220>
<221> MISC_FEATURE
<222> (8)..(8)
<223> Xaa = Cys, homocysteine, or modified cysteine or homocysteine
      such as amide

<220>
<221> MISC_FEATURE
<222> (9)..(9)
<223> Xaa = Ser-Pro-NH2, Lys-Pro-NH2, Ser-OH, Ser-Pro-OH, Lys-Pro-OH,
      Arg-Phe-NH2, Glu-NH2, or is absent

<400> 201
Xaa Xaa Xaa His Phe Arg Trp Xaa Xaa
1          5

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